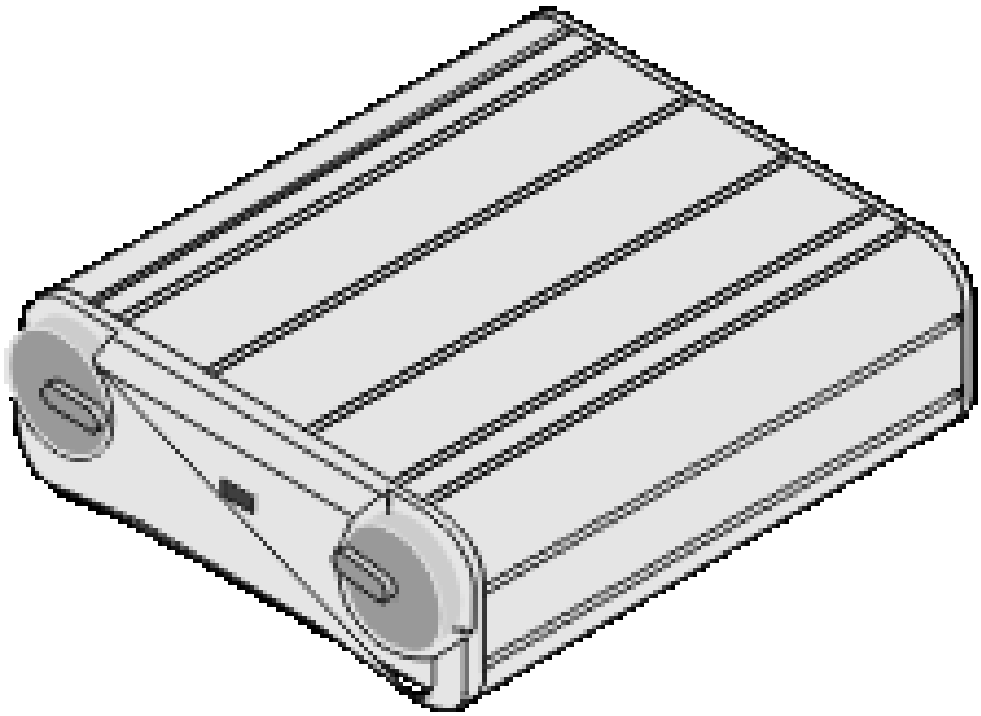
RTS™ Two Wire Intercom Series
innovating the future of communications

MODEL 4030
Two-Channel Listening Station
User Manual



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UNPACKING AND INSPECTION

Immediately upon receipt of the equipment, inspect the shipping container and the contents carefully for any discrepancies or damage. Should there be any, notify the freight company and the dealer at once.

CUSTOMER SUPPORT

Technical questions should be directed to:
Customer Service Department
RTS/Telex Communication Inc.
12000 Portland Avenue South.
Burnsville, MN 55337 U.S.A.
Telephone: (800) 392-3497
Fax: (800) 323-0498
Factory Service: (800) 553-5992

Return Shipping Instructions

Customer Service Department
Telex Communications, Inc. (Lincoln, Nebraska)
Telephone: (402) 467-5321
Fax: (402) 467-3279
Factory Service: (800) 553-5992

Please include a note in the box which supplies the company name, address, phone number, and a person to contact regarding the repair, the type and quantity of equipment, a description of the problem and the serial number(s).

Shipping to the Manufacturer

All shipments of products should be made via UPS Ground, prepaid (you may request from Factory Service a different shipment method). Any shipment upgrades will be paid by the customer. The equipment should be shipped in the original packing carton. If the original carton is not available, use any suitable container that is rigid and of adequate size. If a substitute container is used, the equipment should be wrapped in paper and surrounded with at least four inches of excelsior or similar shock-absorbing material. All shipments must be sent to the following address and must include the Proof of Purchase for warranty repair. Upon completion of any repair the equipment will be returned via United Parcel Service or specified shipper, collect.

Factory Service Department
Telex Communications, Inc.
8601 East Cornhusker Hwy.
Lincoln, NE 68507, U.S.A
Attn: Service

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CHAPTER 1

DESCRIPTION AND SPECIFICATIONS

DESCRIPTION

GENERAL

The Model 4030 is a portable user station for use with RTS/Telex two-wire or 4010 IFB intercom systems. The Model 4030 is a listen-only IFB belt pack that can be used to listen to one or two intercom or program channels.

FEATURES

Features of the Model 4030 include:

- Powered externally, via the intercom system power supply on channel one
- Power-on indicator
- Headset/earset jack set for a wide range of operation
- Monaural phone jack for intercom channel one

- Stereo phone jack for intercom channels one and two

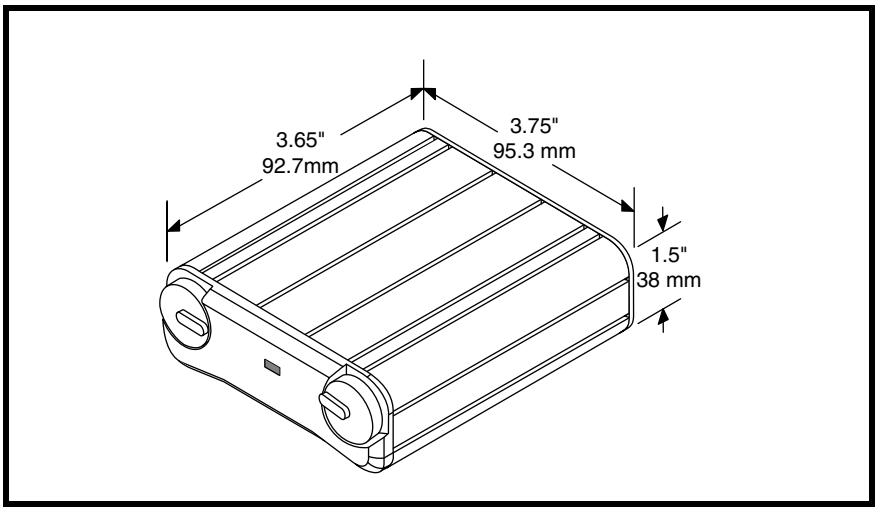

FIGURE 1. Dimensions

CONNECTIONS & CONTROLS

The Model 4030 has the following connections and controls:

- Detented intercom/program volume controls
- Headset connector that accepts 1/4" monaural phone plug
- Headset connector that accepts 1/4" stereo phone plug
- Channel connector that accepts an XLR type 3-pin connector for intercom line and power input

SPECIFICATIONS

GENERAL

POWER REQUIREMENTS

32 VDC nominal (standard RTS line), 150mA maximum

Environmental Requirements

Storage: -20°C to 80°C, 0% to 95% humidity, non-condensing

Operating: 0°C to 50°C; 0% to 95% humidity, non-condensing

Dimensions

Physical : 3.65” (92.7mm) L x 3.75” (95.3mm) W x 1.5” (38mm) D

Weight

10.8 oz. (303 gr)

INTERFACE REQUIREMENTS

Earset / Headphone Compatibility

Accepts 50 to 600 ohm earsets or headphones

Audio Input Requirements

Input Level

2 V p-p (0dBu) nominal

Input Impedance

200 ohms ±5%

Noise Contribution

Less than -60 dB nominal

HEADPHONE AMPLIFIER

Voltage Gain

27 ±3dB from intercom channel to earset

Maximum Output

65 mW into 150 ohms

Frequency Response

250Hz to 8 kHz +1/-4dB

CONNECTOR PIN CONFIGURATIONS

Headset Connectors

Type: 1/4” Monaural Plug

Tip: Headset audio high

Sleeve: Headset audio low

Type: 1/4” Stereo Plug

Tip: Headset channel 1 audio high

Ring: Headset channel 2 audio high

Sleeve: Headset audio low

Audio/Power Connector

Type: XLR-3F

Pin 1	Common
Pin 2	Channel 1 audio and power input
Pin 3	Channel 2 audio

CHAPTER 2

OPERATION

EXTERNAL CONNECTIONS & CONTROLS

NOTE: The numbers refer to the callouts in Figure 2-1.

1. Channel One Volume Control
   Use this control to adjust the headset/earset listen<R>level for channel one.
2. *On* Indicator
   This LED glows green when the beltpack is connected to an intercom channel that is functioning.
3. Channel Two Volume Control
   Use this control to adjust the headset/earset listen level for channel two.

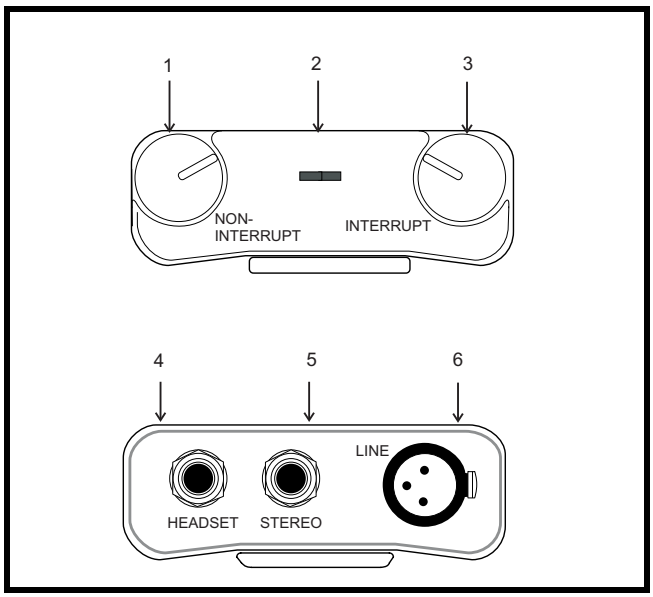

FIGURE 2. Model 4030 Connections and Controls

4. *Mono* Headset Connector
   This connector accepts a wide-response headset/earset, such as the RTS/Telex Model 2233 or Model 2234, with a 1/4" monaural phone plug
5. *Stereo* Headset Connector
   This connector accepts a wide-response headset/earset, such as the RTS/Telex Model 2233 or Model 2234, with a 1/4" stereo phone plug
6. Intercom Channel Connectors
   The Model 4030 intercom channel is connected via a 3-pin female connector. The Model 4030 is powered from the intercom system power supply and will turn on with the intercom system.

CHAPTER 3

Parts Documentation and Schematic

Parts may be obtained directly from Telex at:

Telex Communications, Inc.
12000 Portland Ave South
Burnsville, MN 55337 USA
Telephone: (800) 392-3497
Fax (800) 323-0498

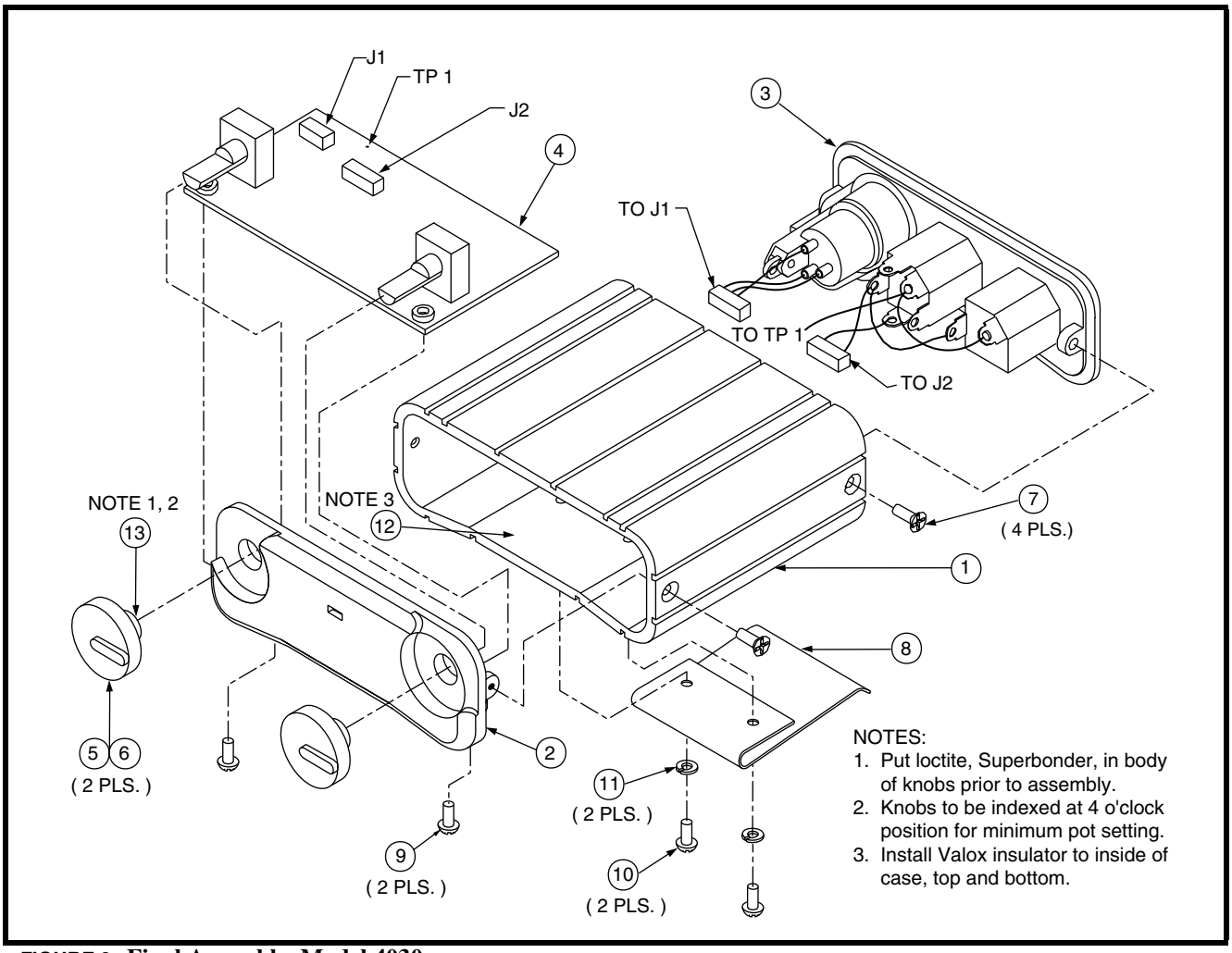

FIGURE 3. Final Assembly, Model 4030

Item No.	Description	Part No
1	Case, 4030	9060-7374-009
2	Top Plate	9070-7489-002
3	Connector Plate Assy (see page x for parts list)	9020-7489-001
4	Circuit Board Assembly (see page x for parts list	9030-7477-002
5	Knob, Nylon Body	9160-563-601
6	Boot, Knob	9160-563-602
7	Screw, 4-40 x 0.25, Flat Head	800124-001
8	Belt Clip	358776
9	Screw, 4-40 x 0.25, Pan Head	51845-038
10	Screw, 4-40 x 0.1875, Pan Head	51845-037
11	Washer, Lock, Split, #4	50086-004
12	Insulating Film	Local Purchase
13	Loctite Superbonder (or equiv)	Local Purchase

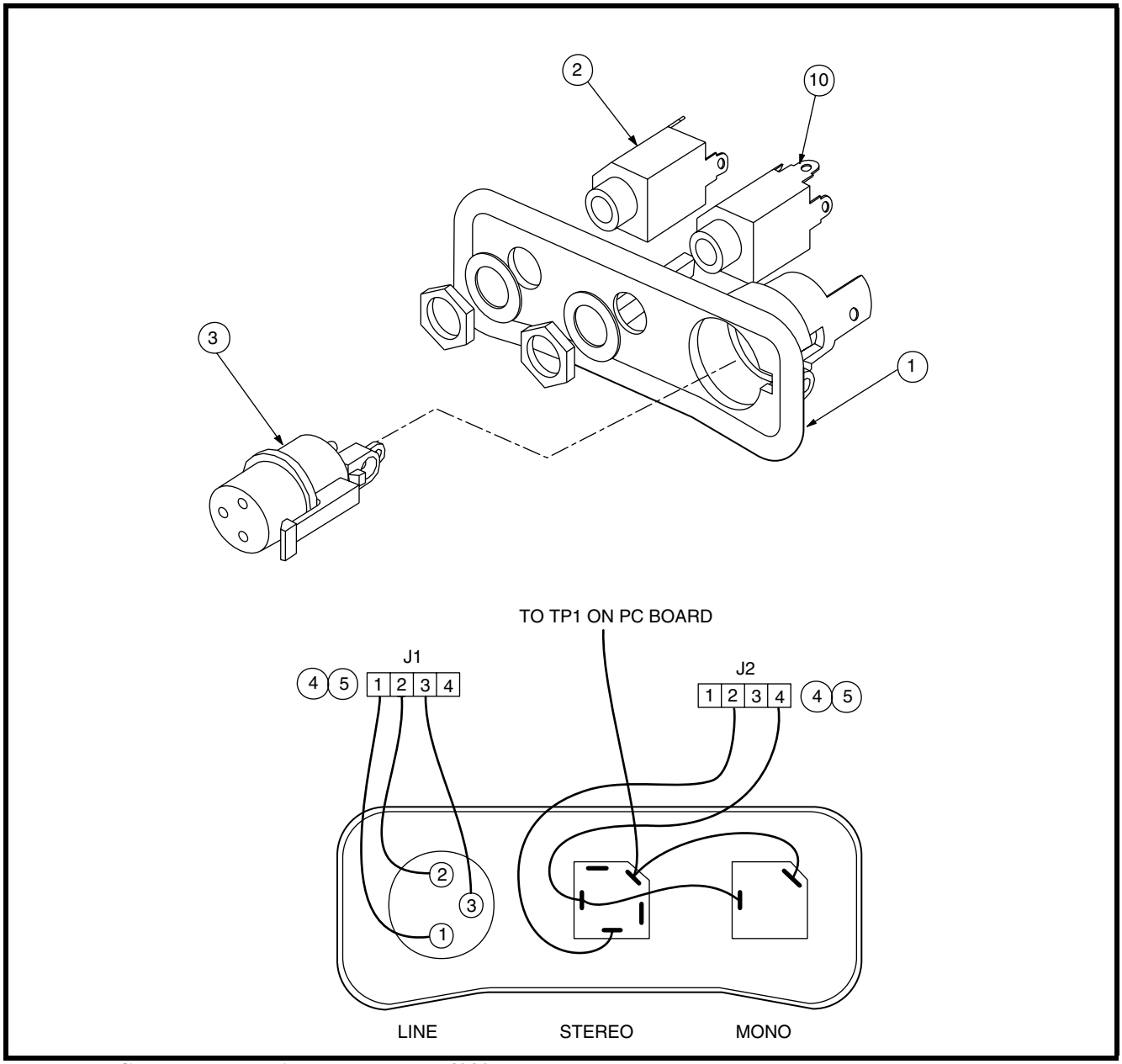

FIGURE 4. Connector Plate Assembly, Model 4030

Item No.	Description	Part No.
1	Connector Plate	90807374-008
2	Jack, Phone, Mono, 1/4”	2013001200
3	Connector, XLR-3F	40055-10
4	Connector, 4-pin	59958-004
5	Contact, Connector	59958-200
6-9	Not Used	
10	Jack, Phone, Stereo, 1/4”	2013000300

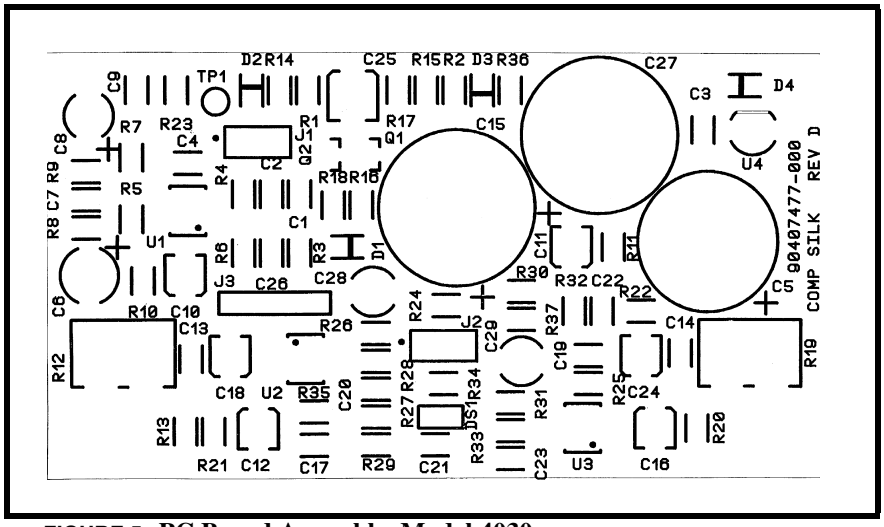

FIGURE 5. PC Board Assembly, Model 4030

Ref No.	Description	Part No.
C1, C2	Capacitor, CM, SM, 0.22 µF, 50V	102880-237
C3	Capacitor, CM, SM, 0.33 µF, 50V	102880-239
C4	Capacitor, CM, SM, 0.1 µF, 50V	102881-351
C5	Capacitor, LE, 2200 µF, 16V	517002-081
C6	Capacitor, EL, 100 µF, 25V	51821-626
C7	Capacitor, CM, SM, 0.01 µF, 50V	102881-339
C8	Capacitor, EL, 47 µF, 25V	51821-625
C9	Capacitor, CM, SM, 0.01 µF, 50V	102881-339
C10,C11	Capacitor, EL, SM, 1 µF, 50V	102884-606
C12	Capacitor, EL, SM, 0.1 µF, 50V	102884-600
C13,C14	Capacitor, CM, SM, 0.1 µF, 50V	102881-351
C15	Capacitor, LE, 2200 µF, 22V	517002-116
C16	Capacitor, EL, SM, 4.7 µF, 25V	102884-410
C17	Capacitor, CM, SM, 220 pF, 50V	102879-208
C18	Capacitor, EL, SM, 4.7 µF, 25V	102884-410
C19	Capacitor, CM, SM, 220 pF, 50V	102879-208
C20 - C23	Capacitor, CM, SM, 0.1 µF, 50V	102881-351
C24	Capacitor, EL, SM, 0.1 µF, 50V	102884-600
C25	Capacitor, EL, SM, 10 µF, 25V	102884-412
C26	Capacitor, LE, 2200 µF, 25V	517002-116
C28,C29	Capacitor, NP, 10 µF, 25V	52710-078
D1 - D4	Diod, SM Switching, 914/4148	58711-100
DS1	LED, Rectangular, Green	58685-101
J1, J2	Connector, St Locking, 0.059, M-4	59958-104
J3	Connector, St Header, 0.100, M-5	590089-005
Q1, Q2	Transistor, SM, SI NPN, MMBTA13	54749-000
R1, R2	Resistor, SM, 22.1 kΩ, 1%, 1/8W	102404-333

Ref No.	Description	Part No.
R3 - R6	Not Used	
R7	Resistor, SM, 10 kΩ, 1%, 1/8W	102404-300
R8	Resistor, SM, 22.1 kΩ, 5%, 1/8W	102513-103
R9	Resistor, SM, 10 kΩ, 1%, 1/8W	102404-300
R10, R11	Resistor, SM, 4.7kΩ, 5%, 1/8W	102513-472
R12	Potentiometer, 10kΩ, 10%, 0.05	54131-005
R13	Resistor, SM, 10Ω, 5%, 1/8W	102513-100
R14, R15	Resistor, SM, 47 kΩ, 5%, 1/8W	102513-473
R16	Resistor, SM, 10Ω, 5%, 1/8W	102513-100
R17	Resistor, SM, 150kΩ, 5%, 1/8W	102513-154
R18	Resistor, SM, 10Ω, 5%, 1/8W	102513-100
R19	Potentiometer, 10kΩ, 10%, 0.05	54131-005
R20	Resistor, SM, 10Ω, 5%, 1/8W	102513-100
R21, R22	Resistor, SM, 1kΩ, 1%, 1/8W	102404-200
R23	Resistor, SM, 0Ω, 5%, 1/8W	102513-000
R25	Resistor, SM, 100kΩ, 1%, 1/8W	102404-400
R26-R33	Resistor, SM, 10Ω, 5%, 1/8W	102513-100
R34	Resistor, SM, 1kΩ, 5%, 1/8W	102513-102
R35	Resistor, SM, 100kΩ, 1%, 1/8W	102404-400
U1	IC, SM, Dual Op Amp, LM8333	16030833-SM
U2,U3	IC, SM, Low Pwr Audio Amp, MC34119	16030146-SM
U4	IC, Voltage Regulator, 12V, 78L12	64106003
	Support Bracket	
	Nut, Self-Cinching, 4-40	59832-002